

*Mimas* was remarkably bright, and could not be missed even when the full light of the planet was admitted to the eye. Generally this satellite is a difficult object, and from the ease with which it is occasionally seen one might think it variable; but I think the difference is due to the quality of the images. On this night the images were excellent for a short time, and *Mimas* and *Enceladus* were seen with ease near conjunction, and the planet and its ring presented a beautiful appearance; but a haze soon covered the sky.

The observation of *Enceladus* on Feb. 18, and of *Tethys* on Feb. 28, were made by A. Hall, jun.

The observations of the companion of *Sirius* were delayed until later than usual. This object was difficult and faint, except on April 19. Double weight has been given to the observation of this date.

1885, April 30.

*Observations of the Companion of Sirius, made at the Dearborn Observatory, Chicago, U.S.A. By Prof. G. W. Hough.*

(Communicated by the Secretaries.)

Date.	P.	δ
1885·091	32°8	8°01
·140	33·8	7·72
·162	34·2	7·93
·189	33·2	8·01
·206	33·3	8·00
·217	30·9	8·00
·222	32·5	8·07
·241	32·3	7·89
·252	32·3	8·05
·255	32·2	7·94
Mean 1885·197	32·7	7·96

*On Daylight Occultations of Aldebaran in 1885.*

By J. R. Hind, F.R.S.

The following are particulars of two occultations of *Aldebaran* occurring in the present year in daylight. The angles from north point are reckoned as in the *Nautical Almanac*.

I. Occultation of July 8-9.

		Disappearance.			Reappearance.		
		h	m	s	h	m	s
Greenwich	...	23	24·1	55	0	15·5	317
Edinburgh	...	23	12·2	70	0	12·8	302
Liverpool	...	23	16·5	62	0	12·8	311
Dublin	...	23	12·5	61	0	9·1	311
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2. *Occultation of Sept. 28.*

			Disappearance.			Reappearance.		
			h	m	°	h	m	°
Greenwich	...	...	20	33·0	132	21	19·3	234
Edinburgh	...	...	20	30·6	147	21	7·2	221
Liverpool	...	...	20	30·4	137	21	14·6	230
Dublin	...	...	20	27·8	135	21	14·4	232

The above are Greenwich mean times at the respective observatories.

*Elliptic Elements of Comet II. 1883 (Ross).* By Robert Bryant, B.A.

Having seen published as yet no discussion of all the observations of this comet, the reduction of the same was undertaken, and the results below are communicated, as they may be not without interest to the Society.

The reason for no complete determination of the elements having been made is perhaps due to the scant material upon which to work, and to the fact that few as the observations are, they do not in general show that agreement with an ephemeris computed from approximate elements which they should do.

From the mean of two sets of approximate parabolic elements an ephemeris was computed, extending from a few days before the first observation of the comet to a few days after it ceased to be visible, and as this ephemeris was originally intended to form the basis of the subsequent determination of the elements, it was computed with the greatest care for alternate days in order to reduce the possibility of error in the interpolation. This was interpolated with fourth and sometimes fifth differences, and the results when corrected for parallax were compared with all the published observations of the comet. Many of the observations then showed far greater and irregular discordances than could be attributed to errors of computation.

On the suggestion, therefore, of Dr. Hind (to whom my thanks are due for the assistance rendered in this and in work of a kindred nature) it was resolved to obtain the elements from Tebbutt's observations alone, which presented almost uniform discordance when compared with the ephemeris.

To this end a parabola was computed passing through the places of his extreme observations, and comparison was made with a middle place. It was found that although an agreement might be forced between the extreme observations and one coordinate of the middle place, yet the remaining coordinate exhibited a large error. It was, therefore, determined to obtain elements with an eccentricity different from unity, and to pass to these by means of differential equations.